CHAPTER XXIV

THE OPEN-HEARTH PROCESS AND THE PNEUMATIC REFINING PROCESS

WITH practical demonstration of the practicability of producing ingot iron and steel from pig iron without scrap additions, the monopoly previously exercised by the pneumatic process in the production of steel from pig iron was taken away. This fact had, however, up to the present little practical importance, since the pneumatic refining process has, thanks to support on all sides and to quite a special extent owing to the gross capital fallen to its share, experienced an unthought-of development, which has attained expression in almost fabulous increase of its productive capacity, and again has resulted in extraordinary cheapening of the costs of production. The process has thereby achieved results which many regard as being simply beyond rivalry.

Meanwhile, the open-hearth refining process has made progress also, and there are already those who forcibly proclaim that open-hearth furnace refinement is not only capable of successful competition with pneumatic refinement, but to quite outstrip .the same.

The economical result of a process is settled by the manufacturing costs of its products. A comparison of the manufacturing costs must, therefore, at once yield full explanation as to which process preference is due in regard to economy. Unfortunately, however, it is not easy even only for a special case to draw up free from objection the manufacturing costs for the different processes, and quite impossible to obtain generally valid estimates in this way. Since the manufacturing costs are compounded from a great mass of items, the amount of which is dependent on the local conditions, and varies up and down with prices of materials and workmen's wages, and is in addition very much dependent on the completeness of the mechanical auxiliaries which are at